

What is claimed is:

1. A microelectro mechanical system (MEMS) switch comprising:
a substrate;
a signal line formed on the substrate;
5 a beam deformed by an electrostatic force to electrically switch with the
signal line; and
a spring type contact unit formed on the signal line to electrically contact the
beam and elastically deformed by an external force.

10 2. The MEMS switch of claim 1, wherein the contact unit is formed as a
curved flip spring.

3. The MEMS switch of claim 1, wherein the contact unit is formed as a
dome shape having a top portion corresponding to the beam.

15 4. The MEMS switch of claim 1, wherein the contact unit is formed into
an arch shape having end units.

20 5. The MEMS switch of claim 1, wherein the contact unit is formed of
amorphous silicon.

6. The MEMS switch of claim 1, wherein a through hole is formed at a
top portion of the dome-shape contact unit.

25 7. The MEMS switch of claim 3, wherein a through hole is formed at a
top portion of the dome-shape contact unit.

8. The MEMS switch of claim 1, wherein the beam is suspended by
spacers that support the beam by being formed at both sides of the beam.

30 9. The MEMS switch of claim 8, wherein the beam is arranged to be
perpendicular to the signal line, and beam driving electrodes are arranged under the
beam and at the both sides of the signal line.

10. The MEMS switch of claim 8, wherein dielectric layers are formed on the beam driving electrodes.

11. The MEMS switch of claim 1, wherein a rear end of the beam is fixed by a spacer formed on the substrate, and a front end of the beam is located above the contact unit of the signal line.

12. An MEMS switch comprising:
a substrate;
first and second signal lines formed on the substrate while the ends of the signal lines are adjacent;
a beam deformed by electrostatic force to electrically contact the first and second signal lines; and
spring type contact units arranged at both ends of the signal lines to electrically connect to the beam and electrically deformed by an external force.

13. The MEMS switch of claim 12, wherein the contact units formed at the both ends of the first and second signal lines are formed as curved flip springs.

14. The MEMS switch of claim 12, wherein the contact units are formed of amorphous silicon.

15. The MEMS switch of claim 12, wherein the beam is suspended by spacers that support the beam by being formed at both sides of the beam.

16. The MEMS switch of claim 15, wherein the beam is arranged to be perpendicular to the first and second signal lines, and beam driving electrodes are arranged under the beam and at the both sides of the signal lines.

17. The MEMS switch of claim 15, wherein dielectric layers are formed on the beam driving electrodes.

18. The MEMS switch of claim 12, wherein a rear end of the beam is fixed by a spacer formed on the substrate, and a front end of the beam is located above the contact units of the first and second signal lines.